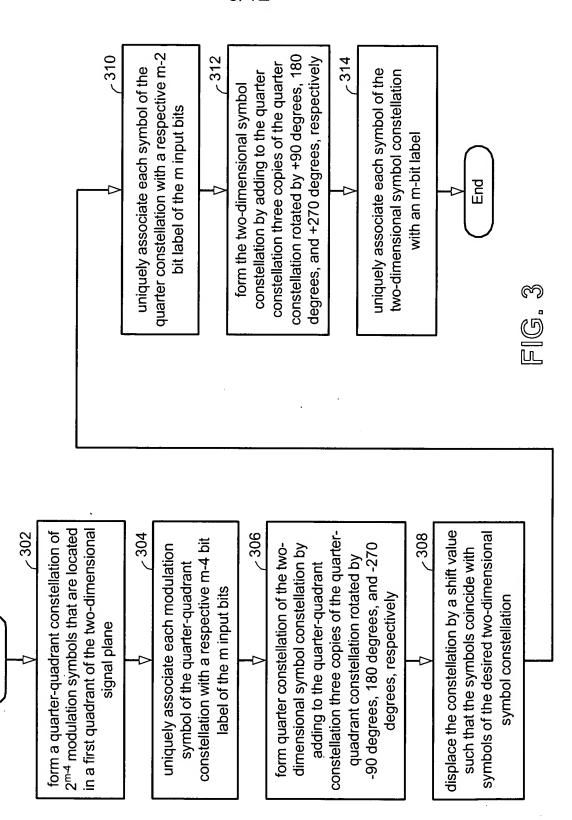
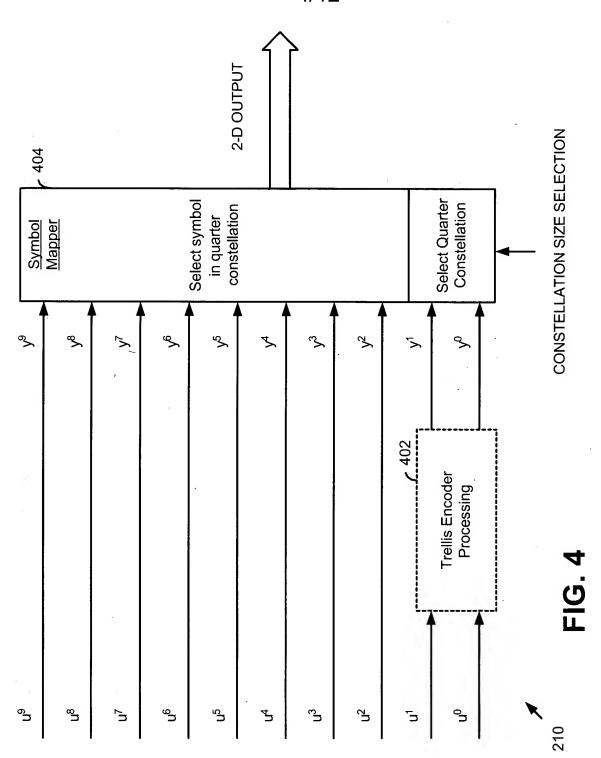


FIG. 2



Start



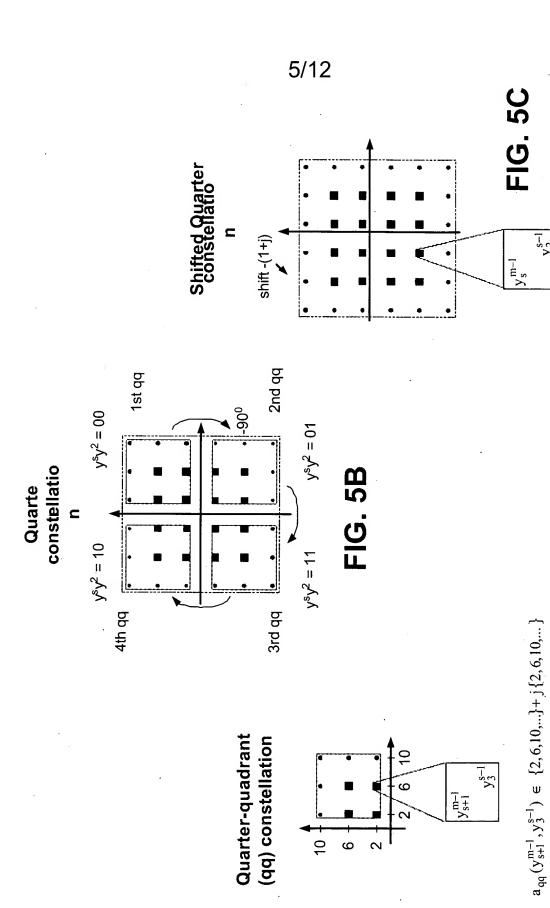


FIG. 5A

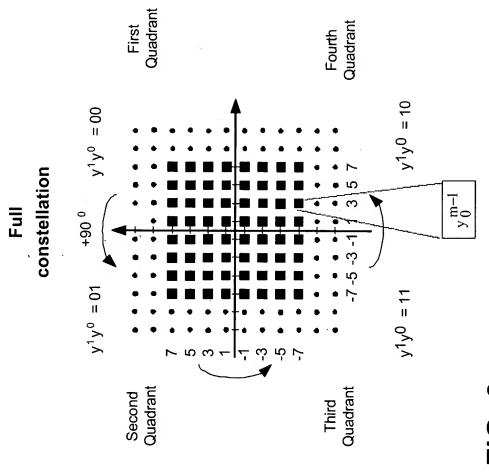
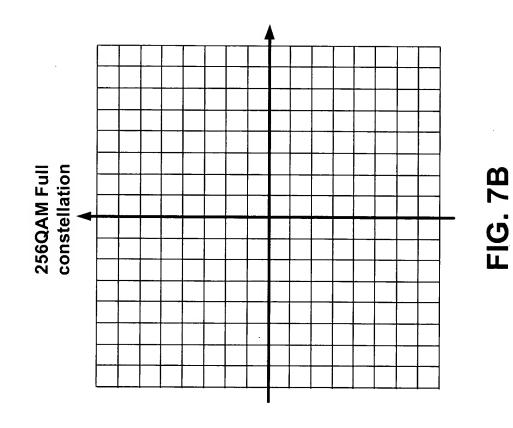


FIG. 6



0

ET.

0

2 -

10 - 01

- 9

14 -

9

constellation

quadrant

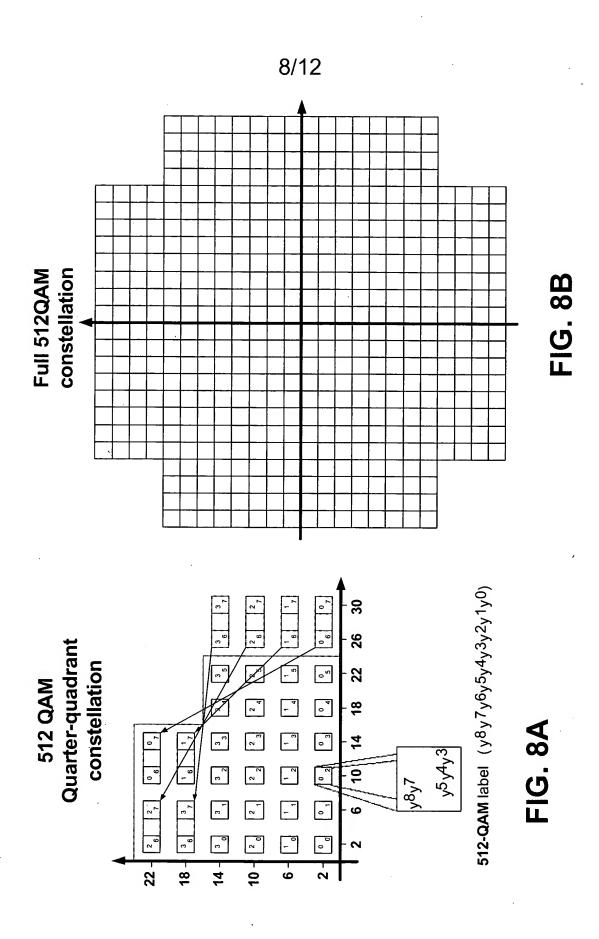
256QAM Quarter-

FIG. 7A

256-QAM label $(y^7y^6y^5y^4y^3y^2y^1y^0)$

y⁴y³

y⁷y⁶



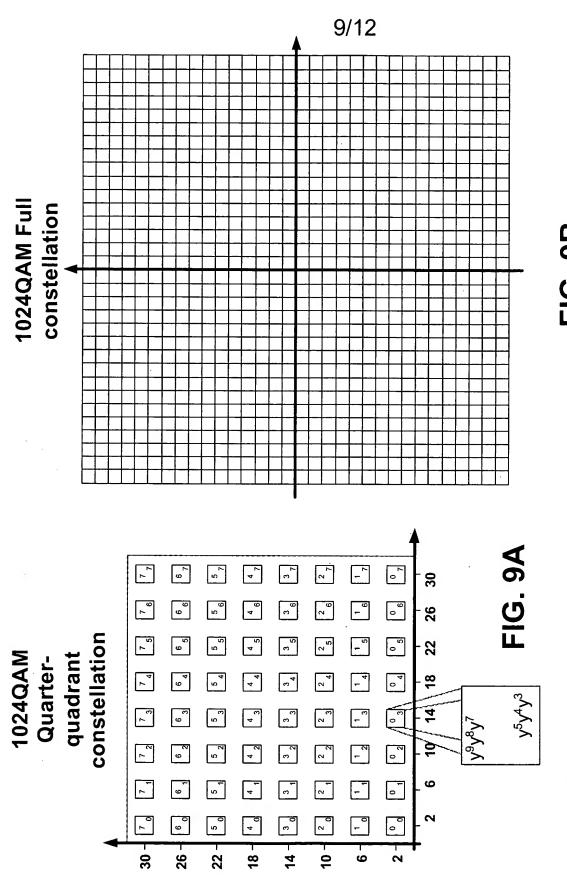


FIG. 9B

1024-QAM label $(y^9y^8y^7y^6y^5y^4y^3y^2y^1y^0)$

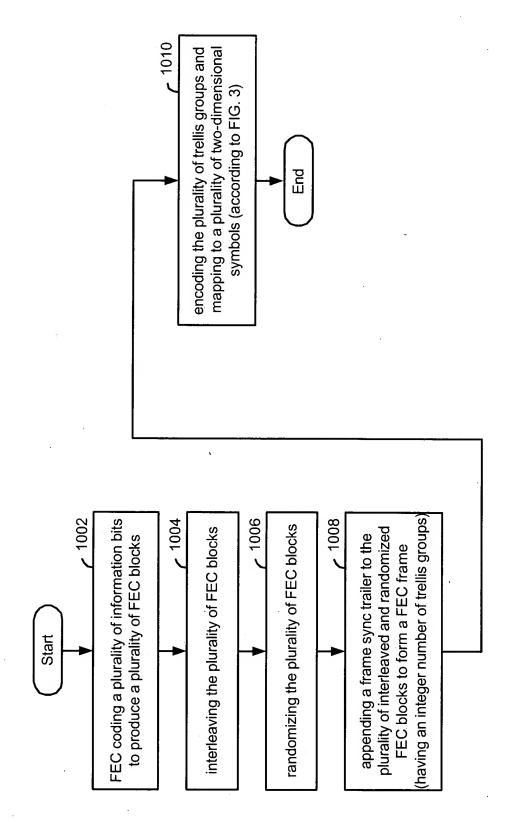


FIG. 10

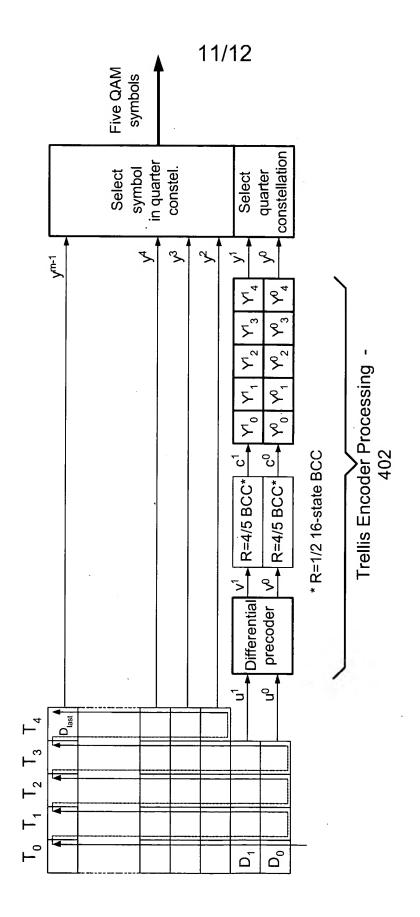


FIG. 11

FEC frame = sequence of 33-, 38-, 43-, or 48-bit trellis groups (TGs)

128QAM RS block

RS block #1 RS block #2 -----

RS block #77 44-bit FST

FST='71E8 4D D4 w0 $0'_{hex}$ inserted as last 44 (u¹,u⁰)-bits in FEC frame)

 $77 \times 128 \times 7 + 44 = 69036 \text{ bits} = 2092 \times 33 \text{-bit TGs}$

256QAM (J.83B)

RS block #1 RS block #2 ----- RS block #88 40-bit FST

FST='71E8 4D D4 w0'_{hex} inserted as last 40 (u¹,u⁰)-bits in FEC frame)

 $88 \times 128 \times 7 + 40 = 78888$ bits = 2076×38 -bit TGs

512QAM

RS block #1 RS block #2 ----- RS block #99 48-bit FST

 $99 \times 128 \times 7 + 48 = 69036 \text{ bits} = 2064 \times 43 \text{-bit TGs}$

FST='71E8 4D D4 w0 00' $_{\rm hex}$ inserted as last 48 (u¹,u⁰)-bits in FEC frame)

1024QAM

RS block #1 | RS block #2 | ----- | RS block #111 | 48-bit FST

block #111 48-bit FST | FST='71E8 4D D4 w0 00' her inserted as last 48 (u1,u0)-bits in FEC frame)

 $111 \times 128 \times 7 + 48 = 99504 \text{ bits} = 2073 \times 48 - \text{bit TGs}$

FEC frames contain integer numbers of TGs

w = 4-bit control word indicating the size of the employed interleaver

FIG. 12